UNITED STATES DISTRICT COURT FOR THE

SOUTHERN DISTRICT OF NEW YORK

AMERICAN COUNCIL OF THE BLIND OF NEW YORK, INC., MICHAEL GOLFO, AND CHRISTINA CURRY, on behalf of themselves and all others similarly situated, Plaintiffs, -against- THE CITY OF NEW YORK, NEW YORK CITY DEPARTMENT OF TRANSPORTATION, BILL DE BLASIO, in his official capacity as Mayor of the City of New York, and POLLY TROTTENBERG, in her official capacity as Commissioner of the New York City Department of Transportation, Defendants.	No. 18-CV-5792 (PAE)

NEW YORK CITY DEPARTMENT OF TRANSPORTATION (DOT) ACCESSIBLE PEDESTRIAN SIGNAL (APS) AMENDED PROPOSED REMEDIAL PLAN

DOT's amended proposed remedial plan expands upon the new innovative approaches submitted to the Court on March 19, 2021 (Dkt. 142-3) and in accordance with this Court's endorsed Order (Dkt. 152), including adding the prioritization of certain categories of intersections while also taking a zoned approach to rapidly increase accessibility in areas of the City where data indicates we can best serve the blind and low-vision population, establishing a new in-house crew with existing staff to perform certain work to increase productivity, exploring the feasibility of installation of APS on existing poles in certain circumstances, creating a new

intergovernmental and community committee, providing a realistic look back period, and ultimately committing to install APS at all pedestrian signals in New York City, until such a time as newer technology becomes widespread and available. We believe our amended plan is thoughtful, data-driven, practical and achieves meaningful access all while working within known budget commitments and constraints.

DOT proposes the following substantive changes to the approach for APS deployment to achieve meaningful access and derive more efficiency from the current available funding. Although the City does not concede that the law requires such, the new approach provides meaningful access as new and existing traffic signals in New York City continue to be outfitted with APS until every intersection with pedestrian signals receives APS installation (or other comparable technology). This amended plan is in addition to DOT's commitment to install APS at all newly signalized intersections and at applicable Street Improvement Projects ("SIPs").[1]

a. **Commitment to Provide APS at all Pedestrian Signals and Prioritization of Certain Intersections**

First, although the City maintains that the law does not require such, the City's new plan commits to provide APS at all intersections with pedestrian signals, including newly installed pedestrian signals and existing pedestrian signals. Based on the current funding and operational constraints, DOT anticipates that all intersections citywide will be outfitted with APS within approximately 30 years. The exact timeframe could vary slightly depending on the

[1] *See* DOT's October 21, 2019 APS Policy (Dkt. 102-1). It should be noted that there will also be capital projects and private development projects which include signal work triggering APS installation. Over time these projects will likely increase the number of APS installed. This number of APS installations, however, is hard to predict. DOT will only know after each project is completed and APS are installed. Nonetheless, it is anticipated that there will be additional APS installed as a result of DOT's policy.

number of new traffic and pedestrian signals that are approved and constructed throughout this time.

As part of this commitment, the amended plan provides for the prioritization of certain categories of intersections within the first five years of the amended proposed remedial plan, including installing APS at all 511 existing Exclusive Pedestrian Phase ("EPP") locations citywide, installing APS at all new signals installed after June 27, 2015 that did not include APS, which are located at approximately 424 intersections citywide, and installing APS at certain intersections with Leading Pedestrian Intervals (*see* attached table).

DOT will prioritize the installation of APS at 211 intersections that have previously been requested by the community, regardless of ranking on the prioritization list. This approach will result in all currently pending requests for APS being completed by 2026. Additionally, DOT intends to prioritize new community requests up to the historical pace of community requests of approximately 35 per year (*see* attached table).

b. Zones of Accessibility

Second, DOT proposes using geographic data to designate zones of accessibility and focus APS installations in those zones to create a continuous system where each adjacent intersection would be outfitted with APS. The zones would be designated by mapping: (1) residential population density of persons who report being blind or having serious difficulty seeing even while wearing glasses[2]; (2) facilities that serve blind or low-vision clients; and (3)

[2] The American Community Survey compiles this data from various questions to provide communities with important statistics to help in their disability services planning. *See* https://www.census.gov/acs/www/about/why-we-ask-each-question/disability/ (last visited on 3/18/2021). The American Community Survey is the Census Bureau's annual survey that supplements the decennial Census. https://www.census.gov/topics/health/disability/guidance/data-collection-acs.html (last visited on 3/18/2021).

analysis of APS request locations DOT has historically received from the public. The first dataset is based on data from the American Community Survey, while the second and third datasets come from DOT database which capture this information.

This proposal differs from the DOT's current process, which uses a ranking system to prioritize individual intersections for APS installation based on the physical characteristics of the intersection. The use of geographic and demographic data will allow the City to focus on zones of accessibility in which groupings of intersections will all receive APS installations in a concentrated period of time, specifically in areas where there are concentrations of blind or low-vision residents and visitors to facilities oriented to blind and low-vision constituents. The proposal to move away from the ranking of physical characteristics of individual intersections is responsive to the way people navigate the city and will allow for continuous paths of travel with APS at every intersection in neighborhoods with such concentrations.

DOT proposes to install APS under this concept by ranking zip codes where: (1) residential population density of persons who report being blind or having serious difficulty seeing even while wearing glasses (as reported from the American Community Survey) exceeds 6,000 or more/square mile; and (2) three or more APS requests were received and/or three or more facilities that serve visually impaired clients are located within the zip code.

The following ten zones have been identified at this juncture as zones of increased accessibility in the City using this methodology. As work with the newly proposed APS Advisory Committee referenced below gets underway, DOT proposes to work with that committee to identify new/additional zones of accessibility moving forward. *See* heat maps of each borough, zip code ranking list, and list of intersections that will be equipped with APS attached hereto as Exhibit A.

i. Manhattan (Chelsea)

- This zone is located within the 10001 zip code of Manhattan.
- Approximately 77 intersections will be retrofitted with APS within this amended remedial plan.

ii. Manhattan (Midtown West)

- This zone is located within the 10011 zip code of Manhattan.
- Approximately 68 intersections will be retrofitted with APS within this amended remedial plan.

iii. Bronx (Riverdale)

- This zone is located within the 10463 zip code of the Bronx.
- Approximately 52 intersections will be retrofitted with APS within this amended remedial plan.

iv. Bronx (Morris Park)

- This zone is located within the 10462 zip code of the Bronx.
- Approximately 89 intersections will be retrofitted with APS within this amended remedial plan.

v. Bronx (Bathgate)

- This zone is located within the 10457 zip code of the Bronx.
- Approximately 99 intersections will be retrofitted with APS within this amended remedial plan.

vi. Bronx (Melrose)

- This zone is located within the 10456 zip code of the Bronx.

- Approximately 105 intersections will be retrofitted with APS within this amended remedial plan.

vii. Queens (South Ozone Park)

- This zone is located within the 11420 zip code of Queens.
- Approximately 67 intersections will be retrofitted with APS within this amended remedial plan.

viii. Bronx (Van Cortlandt Park)

- This zone is located within the 10467 zip code of the Bronx.
- Approximately 84 intersections will be retrofitted with APS within this amended remedial plan.

ix. Brooklyn (Downtown Brooklyn)

- This zone is located within the 11201 zip code of Brooklyn.
- Approximately 122 intersections will be retrofitted with APS within this amended remedial plan.

x. Manhattan (Upper East Side)

- This zone is located within the 10065 zip code of Manhattan.
- Approximately 65 intersections will be retrofitted with APS within this amended remedial plan.

c. <u>Establish a New In-house Crew to Install APS at Certain Prioritized Intersections</u>

Third, DOT proposes to establish a new in-house crew from existing personnel to install APS at specific intersections. The in-house crew will install APS at existing Exclusive Pedestrian Phase ("EPP") locations, existing Leading Pedestrian Interval ("LPI") locations, and may also

address intersections from the other categories depending on actual field conditions (*see* attached table).

This proposal differs from DOT's current process where currently all APS installations are performed by outside DOT contractors. The in-house crew will install APS on existing poles, which will not require the excavation of the intersection to install new conduit. This work of installing APS on existing poles is within the capabilities of existing staff and does not require specialized contractor equipment and staff, making this an achievable target. The installation approach is proposed to be oriented to maximize the use of existing poles while continuing to follow the Manual on Uniform Traffic Control Devices ("MUTCD") guidelines that are applicable for the installation of APS (*see* Section 4E.08).[3]

The use of existing poles saves on some of the more costly and time-consuming elements of APS installation, namely trenching (*i.e.* digging within and across streets to provide underground electrical connections between poles at the intersection) and installation of new conduit and foundations. New poles will still be needed at some locations where the existing poles cannot meet the MUTCD Guidelines for APS placement. This approach means that many corners will be designed with two APS units for two different crosswalks on the same pole, which is consistent with MUTCD guidelines. Research conducted by DOT personnel indicates that several other major U.S. cities, such as San Francisco, utilize this existing pole approach and that it can be successful both in terms of APS coverage for visually impaired pedestrians and budget and operational efficiency. Until a track record of installations of this type has been established it is difficult to estimate the additional coverage that might be obtained by these

[3] MUTCD Guidelines, Section 4E.08, paragraph 06 states: "Where there are physical constraints that make it impractical to place the pedestrian pushbutton between 1.5 and 6 feet from the edge of the curb, shoulder, or pavement, it should not be farther than 10 feet from the edge of curb, shoulder, or pavement."

construction efficiencies. Additionally, DOT will want to gain feedback from users, which will be important in refining the approach. Monetary savings derived from this approach can be rolled back into the APS deployments to increase the numbers presented in the attached table.

d. Development of APS Advisory Committee

Similar to the quarterly meeting that DOT currently conducts with some members of the blind and low vision community, DOT proposes to establish an APS Advisory Committee that will meet quarterly and include members of the public as well as all relevant advocacy groups, including plaintiffs. The Committee will be organized by representatives from DOT (Traffic Operations and DOT's Accessibility Coordinator) and the Mayor's Office of People with Disabilities ("MOPD"). One of the main purposes of this committee is to obtain feedback from the community as a part of continuing effort to refine the design approach and prioritization methodology. This will include assessing the extent to which the amended proposed remedial plan is addressing those intersections that are most challenging for the community and whether additional efforts are needed to target such intersections. This could also include a discussion about whether to continue the zones of accessibility approach by ranking more neighborhoods after the 10 listed above are complete, returning to the ranking of individual intersections, or some combination of those approaches.

e. Five-year Look Back Period:

Lastly, the City proposes a five year look back period to assess compliance with the amended proposed remedial plan and its success in meeting the needs of the community. Certainly City funding capacity may change and the amended proposed remedial plan could be refined if that is the case. Moreover, as with any construction work in New York City, the construction proposed in this plan may encounter unforeseen field conditions and require

modification to adapt to the real-world conditions encountered. Furthermore, emerging technology may reveal alternative audible pedestrian assistance services that work and necessitate revisiting the type of APS devices currently being installed.

DOT is, in fact, currently evaluating new technologies for use in the APS program. DOT has a contract with the University Transportation Research Center ("UTRC"). This multi-year contract provides DOT with ongoing research and development programs pertaining to urban Intelligent Transportation Systems ("ITS") deployment. One of the tasks under this contract is to perform research entitled "Pedestrians and Cyclists Safety Using ITS Technologies in NYC." The purpose of this task is to gather knowledge about all new and innovative technologies and methodologies and determine the most useful countermeasures that could be used in New York City to reduce pedestrian/cyclist injuries, conflicts, crashes and fatalities to meet the goals of the Mayor's Vision Zero Action Plan.[4]

Additionally, specific attention will be given to the smartphone technologies associated with APS units. Research will be conducted to determine the latest and most innovative technologies currently being implemented nationally and internationally and under what conditions these new technologies are most beneficial for New York City.

The final outcome of this task will be a report providing a method to objectively look at potential measures and recommendations to decide under what conditions each countermeasure should be used. NYC DOT will continue to evaluate the potential uses of new technologies on the market to assist blind and low vision individuals in navigating the City's roadways.

DOT is also working with three companies in an initiative titled "Call to Innovation" to develop technologies that provide mobility guidance for the visually impaired and make it easier

[4] *See* Vision Zero Action Plan https://www1.nyc.gov/content/visionzero/pages/library

and safer for them to navigate the streets of New York City. The objective of the project is to create a technological solution that will guide blind and low vision pedestrians through an intersection utilizing an ITS solution. Due to the COVID-19 pandemic, testing of any actual technical solutions are currently on hold. DOT anticipates continuing to work with the Pedestrians for Accessible and Safe Streets ("PASS") coalition (or possibly the new APS Advisory Committee formed pursuant to this amended proposed remedial plan), by engaging with their members and getting participants for testing proposed solutions this summer.

DOT is currently field testing alternative APS technologies consisting of hardware installed at intersections, and fobs and smartphone apps carried by the user. Full intersection installation costs for these alternative technologies are in the range of $8,000 to $10,000 per intersection. While the technologies are still undergoing refinement and will require adoption in MUTCD for compliance purposes, they show great promise and usability both in New York City field tests and are widely used at intersections in France. With the potential intersection cost of 1/8 of the current APS technology ($64,000), this advancement in technology would make the future deployment of alternative technologies much more cost-effective, easier to install and potentially more user-friendly. The immediate focus on areas of high need with the existing APS technology is absolutely appropriate and imperative. However, overcommitting to the existing technology bears a risk that the limited funding available will be used to treat a far smaller number of intersections than can be treated with less expensive developing technology. DOT believes it is clear from the pace of technological change that there will be more efficient means of providing traffic phase information to those with visual disabilities within the next ten years.

f. Numbers of Projected APS Installation Pursuant to this Amended Proposed Remedial Plan

The attached table represents the approximate number of intersections of APS that will be installed over the next 30 years based on the current available and projected funding and this amended proposed remedial plan. The target number of installations reflected in the attached table is 500 per year (starting in FY23). However, DOT proposes that as long as that annual target number it met, there is some flexibility of implementation within each category such that a slight reduction in APS installations in one category with a corresponding increase in APS installations in another category be deemed compliant with an adopted remedial plan.

Conclusion

DOT estimates that as of December 31, 2020 there were 13,430 intersections with traffic and pedestrian control signals in the City of New York. As of December 31, 2020, 749 of those 13,430 intersections were equipped with APS. Pursuant to this amended proposed remedial plan, by the end of five years (FY22-FY26) the City will have installed APS at approximately 2,275 additional intersections (approximately 450 of which are estimated to be newly installed traffic signals) bringing the total intersections equipped with APS to approximately 3,024, representing 22% of signalized intersections and completing all of the community requested locations, EPP locations, and all of the new signals installed since June 27, 2015 that were originally installed without APS. By ten years (FY21-FY31) the City will have installed APS at approximately 4,775 additional intersections (approximately 900 of which are estimated to be newly installed traffic signals) bringing the total intersections equipped with APS to approximately 5,524 with the majority located so as to allow continuous accessible paths of travel within high priority locations in New York City. At the end of 10 years, the City will have APS installed at almost 40% of its signalized intersections (5,524 of 14,330). In addition, capital and development

projects outside of DOT's direct workflow, but that involve substantial signal work, will continue to be required to implement APS, supplementing the above numbers, but at a level which is not known to DOT at this time. *See* fn. 1 above. Following this approach, the City will continue to install APS at signalized intersections until 100% of pedestrian signals include APS. We estimate that this will be achieved within 30 years, but could vary depending on the rate of new traffic signal approval and construction, contractor performance as well as field conditions encountered during construction.

Together, the installation prioritization, neighborhood clustering and more efficient installation procedure within the current budget constraints will yield the most meaningful access to traffic signals in New York City by blind and low-vision pedestrians in the shortest timeframe possible. It will provide greater continuity to the system, a stronger orientation to the people who use APS and extend the reach of the deployment to over one quarter of all signalized intersections, with 100% coverage in the ten zones with the greatest demonstrated need in the short term. This amended plan includes the full remediation of those signals installed without APS subsequent to June 27, 2015 (totaling 424 intersections) and the addition of APS at 511 EPP locations within 5 years. This amended plan will also bring a targeted approach to intersections most in need of attention. Finally, the amended plan provides an aggressive timetable to equip all pedestrian signals in New York City with APS within the administrative and financial constraints that currently exist, while allowing for the potential for more rapid accessibility should the technology or the City's financial and administrative circumstances change.